

IN THE CLAIMS

Please amend the claims as follows:

- 1 1. (Currently Amended). A magneto-optical device comprising:  
2 a waveguide structure that includes at least [[one]] two cladding regions and core  
3 region, wherein said cladding regions and core region comprise semiconductor alloy  
4 materials, either said at least [[one]] two cladding regions or said core region is doped  
5 with ferromagnetic materials so as to increase the magneto-optical activity of said device.
- 1 2. (Currently Amended). The magneto-optical device of claim 1, wherein said  
2 ferromagnetic materials comprises Fe, Ni, Co or fine particles of Fe.
- 1 3. (Original). The magneto-optical device of claim 1, wherein said at least one cladding  
2 region comprises InP.
- 1 4. Canceled.
- 1 5. (Original). The magneto-optical device of claim 1, wherein said core region comprises  
2 InGaAsP.
- 1 6. (Original). The magneto-optical device of claim 1, wherein said core region comprises  
2 InGaAlAs.
- 1 7. (Currently Amended). A method of forming a magneto-optical device comprising:  
2 forming a waveguide structure that includes at least [[one]] two cladding regions  
3 and core region, wherein said cladding regions and core region comprise semiconductor  
4 alloy materials; and

5           doping either said at least [[one]] two cladding regions or said core region with  
6   ferromagnetic materials so as to increase the magneto-optical activity of said device.

1   8. (Currently Amended). The method of claim 7, wherein said ferromagnetic materials  
2   comprises Fe, Ni, Co or fine particles of Fe.

1   9. (Original). The method of claim 7, wherein said at least one cladding region comprises  
2   InP.

1   10. Canceled.

1   11. (Original). The method of claim 7, wherein said core region comprises InGaAsP.

1   12. (Original). The method of claim 7, wherein said core region comprises InGaAlAs.